AMENDMENTS TO THE CLAIMS

Applicants request amendment of claim 7 as follows. Applicants request cancellation of claims 15 and 16. The listing of the claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (canceled)

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (canceled)

7. (currently amended): A method for vaporizing a liquid or solid sample for analysis, comprising:

a) providing a micropyrolyzer, comprising:

a substrate having a suspended membrane formed thereon, the membrane having a surface for accepting the sample, wherein the substrate is selected from the group consisting of semiconductors and dielectrics; and

a resistive heating element disposed on the membrane;

b) depositing the sample on the sample-accepting surface of the membrane and wherein the sample comprises a fatty acid or a mixture containing fatty acids;

c) introducing a reagent chemical to the sample;

d) heating the sample on the membrane with the resistive heating element to form a vapor; and

e) removing the vapor from the micropyrolyzer for chemical analysis of the vapor.

8. (canceled)

9. (original): The method of claim 7, wherein the sample size is less than 3 microliters.

10. (original): The method of claim 7, wherein the sample heating rate is greater than 20°C per millisecond.

11. (original): The method of claim 7, wherein the sample heating rate is greater than 40°C per millisecond.

12. (original): The method of claim 7, wherein the sample heating rate is greater than 60°C per millisecond.

13. (original): The method of claim 7, wherein the sample can be heated to a temperature of up to 1000°C.

14. (original): The method of claim 7, wherein the heating requires less than 1 Watt of power.

15. (canceled).

16. (canceled).

17. (original): The method of claim 7, wherein the reagent chemical comprises a methylation reagent.

18. (original): The method of claim 17, wherein the reagent chemical comprises tetramethylammonium acetate, trimethylphenylammonium hydroxide, phenyl-trimethylammonium fluoride, N,N-Dimethylformamide dimethyl acetal, or (m-trifluoro-methylphenyl) trimethylammonium hydroxide.

19. (original): The method of claim 17, wherein the reagent chemical comprises tetramethylammonium hydroxide.

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (canceled)

27. (canceled)

28. (canceled)

29. (canceled)

30. (canceled)

31. (canceled)

32. (canceled)

33. (canceled)

34. (canceled)

35. (previously presented): The method of claim 7 wherein the substrate comprises silicon.

36. (previously presented): The method of claim 7, wherein the membrane comprises a material selected from the group consisting of silicon nitride, polysilicon, silicon oxynitride and silicon carbide.

37. (previously presented): The method of claim 7, wherein the resistive heating element comprises a circuitous metal trace.

38. (previously presented): The method of claim 37, wherein the metal comprises a metal selected from the group consisting of platinum, molybdenum, titanium, chromium, palladium, gold, tungsten, and combinations thereof.